IN THE CLAIMS:

1. (Currently amended) An isolated nucleic acid comprising the nucleotide sequence of GAVE3 (SEQ ID NO:1) or a variant of GAVE3 having a GAVE3 function.

2. (Original) An isolated nucleic acid comprising a sequence that encodes a GAVE3 polypeptide with the amino acid sequence of SEQ ID NO:2.

3. (Currently amended) The isolated nucleic acid according to claim 1, wherein said isolated nucleic acid is selected from the group consisting of RNA, genomic DNA, synthetic DNA and cDNA.

4. (Original) An isolated nucleic acid comprising an allelic variant of the nucleotide sequence of GAVE3 (SEQ ID NO:1).

5. (Original) The isolated nucleic acid according to claim 1, wherein said variant encodes an addition, deletion or substitution mutation.

6. (Currently amended) The isolated nucleic acid according to claim 5~~,~~ encoding a substitution mutation in ~~that~~ which said substitution mutation provides at least one ~~functionally equivalent~~ conservative amino acid ~~residue within the sequence~~substitution.

7. (Currently amended) An isolated nucleic acid encoding a polypeptide with GAVE3 function comprising a sequence that hybridizes ~~under stringent conditions~~ to a hybridization probe that is complementary to SEQ ID NO:1 or complementary to a nucleic acid encoding SEQ ID NO:2 and wherein said probe comprises a fragment of SEQ ID NO:1 or a nucleic acid encoding SEQ ID NO:2, and wherein said hybridizing

nucleic acids are at least 55% complementary.

8. (Currently amended) An isolated nucleic acid comprising a sequence that encodes a polypeptide, the amino acid sequence of ~~that~~ which is at least 60% identical to SEQ ID NO:2~~1~~.

9. (Original) A purified polypeptide, the amino acid sequence of that comprises SEQ ID NO:2.

10. (Original) A purified polypeptide comprising the third intracellular loop as set forth in SEQ ID NO:2.

11. (Original) An expression vector comprising the nucleic acid of claim 1 operably linked to an expression control element.

12. (Original) The expression vector of claim 11, wherein said expression control element is selected from the group consisting of constitutive, cell-specific and inducible regulatory sequences.

13. (Original) A cultured cell comprising the vector of claim 11.

14. (Original) A cultured cell comprising the nucleic acid of claim 1 operably linked to an expression control element.

15. (Original) A cultured cell transfected or transformed with the vector of claim 11 or a progeny of said cell, wherein said cell expresses the polypeptide encoded by the nucleic acid comprising said vector.

16. (Original) The cultured cell of claim 13, wherein said cell is selected from the group consisting of eukaryotic cells and prokaryotic cells.

17. (Original) A method of producing a protein comprising culturing the cell of claim 13 under conditions permitting expression of the polypeptide encoded by the nucleic acid comprising said vector.

18. (Original) An antibody that binds specifically to GAVE3.

19. (Original) The antibody of claim 18, that is a monoclonal antibody or a polyclonal antibody.

20. (Original) A therapeutic method for modulating GAVE3 signaling activity or signal transduction in a patient in need of treatment comprising administering to said patient an agonist, an antagonist or an inverse agonist of GAVE3.

21. (Original) A method for identifying an agonist of GAVE3 comprising: contacting a potential agonist with a cell expressing GAVE3 and determining whether in the presence of said potential agonist the signaling activity of GAVE3 is increased relative to the activity of GAVE3 in the absence of said potential agonist.

22. (Original) A method for identifying an inverse agonist of GAVE3 comprising: contacting a potential inverse agonist with a cell expressing GAVE3 and determining whether in the presence of said potential inverse agonist, the activity of GAVE3 is decreased relative to the activity of GAVE3 in the absence of said potential inverse agonist, and is decreased in the presence of an endogenous ligand or agonist.

23. (Original) A method for identifying an antagonist of GAVE3 comprising: contacting a potential antagonist with a cell expressing GAVE3 and determining whether in the presence of said potential antagonist the signaling activity of GAVE3 is decreased relative to the activity of GAVE3 in the presence of an endogenous ligand or

agonist.

24. (Original) A therapeutic composition comprising an agonist an antagonist or an inverse agonist of GAVE3 capable of modulating GAVE3 signaling activity or transduction.

B1 25. (Original) A method for treating a disease comprising administering to a patient in need of treatment a therapeutic composition comprising an agonist, an antagonist or an inverse agonist of GAVE3 capable of modulating GAVE3 signaling activity or transduction.